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# COORDINATION THEORY AND ITS IMPLICATIONS FOR INFORMATION TECHNOLOGIES ORGANIZATIONS, AND GROUP WOkK

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## Recommended Citation

Malone, Tom, "COORDINATION THEORY AND ITS IMPLICATIONS FOR INFORMATION TECHNOLOGIES ORGANIZATIONS, AND GROUP WOkK" (1991). *ICIS 1991 Proceedings*. 43.  
<http://aisel.aisnet.org/icis1991/43>

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\* N E W D O C \*

# TUTORIAL 3

## COORDINATION THEORY AND ITS IMPLICATIONS FOR INFORMATION TECHNOLOGIES, ORGANIZATIONS, AND GROUP WORK

Tom Malone  
Massachusetts Institute of Technology

More and more companies today are installing computer networks that connect their employees to each other and to other companies. But how can companies take advantage of these increasingly powerful computer networks? Can these new networks help companies organize themselves more productively and coordinate more effectively with their customers and suppliers?

This tutorial describes a new interdisciplinary perspective for approaching these problems. This new research perspective, called *coordination theory*, focuses on the interdisciplinary study of coordination. It uses and extends ideas about coordination from disciplines such as computer science, organization theory, operations research, economics, linguistics, and psychology.

A key tenet of this approach is that many of the most important uses of computers (today and in the future) are not just for *computing* things, but for *coordinating* people's activities. Therefore, understanding the costs, benefits, and other characteristics of different kinds of coordination is critical for understanding how information technology can help people organize their activities in new ways. As a step in this direction, the tutorial will include a framework for analyzing alternative forms of coordination in terms of *actors* performing *interdependent activities* that achieve *goals*.

A major section of the tutorial will summarize recent applications of coordination theory in understanding information technology and organizations. For example, we will see how simple ideas about the costs of coordination can help make predictions about "electronic markets," "networked organizations," and "value-adding partnerships." We will also see how ideas about coordination have helped researchers develop new tools to support people making group decisions, managing complex projects, and dealing with information overload.

The final section of the tutorial will suggest elements of a research agenda for this new area.

## **TUTORIAL 4**

### **WE CAN DO BETTER: INTEGRATING THEORIES OF NOVEL ORGANIZATIONS, NEW ORGANIZATIONAL FORMS, AND INFORMATION TECHNOLOGY**

**George P. Huber**

The University of Texas at Austin

Executives currently creating novel organizations and new organizational forms are not doing it well. Journalists and organizational scientists writing about new organizational forms are not understanding what they see. Nothing is as useful as a good theory, and these executives, journalists, and even organizational scientists are doing their jobs less well than they could because they are not drawing on the basic theories relevant to their tasks.

This tutorial examines the history and current state of novel organizations and new organizational forms and shows how poor designs and misinterpretations of current strategic organizational arrangements could be avoided by the simultaneous application of currently available theories of organizational design and information technology. Included within the tutorial are critiques and suggestions for agency theory, for the media richness concept, and for information systems research.